



Avaya Solution & Interoperability Test Lab

Application Notes for BBX Technologies Vuesion Multimedia Contact Center with Avaya IP Office 8.0 – Issue 1.0

Abstract

These Application Notes describe the configuration steps required for BBX Technologies Vuesion Multimedia Contact Center to interoperate with Avaya IP Office. In the compliance testing, BBX Technologies Vuesion Multimedia Contact Center provided skill based routing, announcements, and call reporting by using the SIP User, TAPI, and DevLink interfaces from Avaya IP Office 8.0.

Information in these Application Notes has been obtained through DevConnect compliance testing and additional technical discussions. Testing was conducted via the DevConnect Program at the Avaya Solution and Interoperability Test Lab.

1. Introduction

These Application Notes describe the configuration steps required for BBX Technologies Vuesion Multimedia Contact Center to interoperate with Avaya IP Office. In the compliance testing, BBX Technologies Vuesion Multimedia Contact Center provided skill based routing, announcements, and call reporting by using the SIP User, TAPI, and DevLink interfaces from Avaya IP Office.

The SIP User interface was used by Vuesion to register virtual SIP users and to route incoming calls via an available SIP user in a hunt group to the Vuesion server. The TAPI interface was used by Vuesion to monitor and control the virtual SIP and physical agent and supervisor users, and to provide call control via the agent and supervisor desktops. The DevLink interface was used by Vuesion to obtain real-time call events for call reporting purposes.

The BBX Technologies Vuesion Multimedia Contact Center consisted of the Vuesion Server, Vuesion Client, and Vuesion Reports software.

2. General Test Approach and Test Results

The feature test cases were performed both automatically and manually. Upon start of the BBX Technologies Vuesion Multimedia Contact Center application, the application automatically registers the virtual SIP users to Avaya IP Office.

For the manual part of the testing, incoming calls were made to the main hunt group. The Vuesion server used the TAPI event messages to track agent states, and specified calls to be redirected to available agents. Manual call controls from both the agent telephones and the agent desktops were exercised to verify remaining features such as answering and transferring of calls.

The verification of tests included using the Vuesion server logs for proper message exchanges, the Vuesion Client application for proper call controls, and the Vuesion Reports application for proper call reporting.

2.1. Interoperability Compliance Testing

The interoperability compliance test included feature and serviceability testing.

The feature testing focused on verifying the following on BBX Technologies Vuesion Multimedia Contact Center:

- Proper registration of virtual SIP users.
- Use of TAPI functions to monitor users and hunt groups, route incoming calls, support call control via agent desktops, set call forwarding and message waiting indicator (MWI).
- Proper handling of call scenarios including incoming calls to main hunt group, hold/reconnect, blind/attended transfer, drop, queue, park/unpark, coverage, call forwarding, supervisor monitor, outgoing call, account code, outpulse of DTMF digits, multiple agents, and simultaneous calls.
- Use of real-time DevLink events to monitor calls with proper reporting of calls.

The serviceability testing focused on verifying the ability of BBX Technologies Vuesion Multimedia Contact Center to recover from adverse conditions, such as disconnecting and reconnecting the Ethernet cables to the Vuesion server and to the Vuesion client.

2.2. Test Results

All test cases were executed and passed. The following were observations on BBX Technologies Vuesion Multimedia Contact Center from the compliance testing:

- Outgoing calls with account codes can only be placed via the phone, and the reported entry showed the first seven numeric digits in the account code with alphanumeric shown as blank.
- Inbound ACD calls that covered to the agent's voicemail do not show up in the reports.
- In the blind transfer scenario, two reporting entries were reported. The entry associated with the transfer-from agent included the duration of the call at the transfer-from agent, and the entry associated with the transfer-to agent included the duration of the entire call.
- In the attended transfer scenario, only one reporting entry was reported against the transfer-to agent and included the duration of the entire call. Also the transfer-to agent cannot release the call from the desktop. The desktop shows the call to be released however call is still active and can only be released from the phone.
- During an active call if the link goes down and after the recovery of the link between the Vuesion server and IP Office, the Vuesion client can no longer control the call via the desktop. The workaround is to manually control the call via the phone. However after the first manual control from the phone, agent can once again control the call via the desktop. If the link goes down at the same instant as a call is presented to the agent, then after recovery, incoming call is still shown and agent has no control on the desktop. Agent has to manually refresh to get control back of the desktop.
- This release does not support the conference feature.

2.3. Support

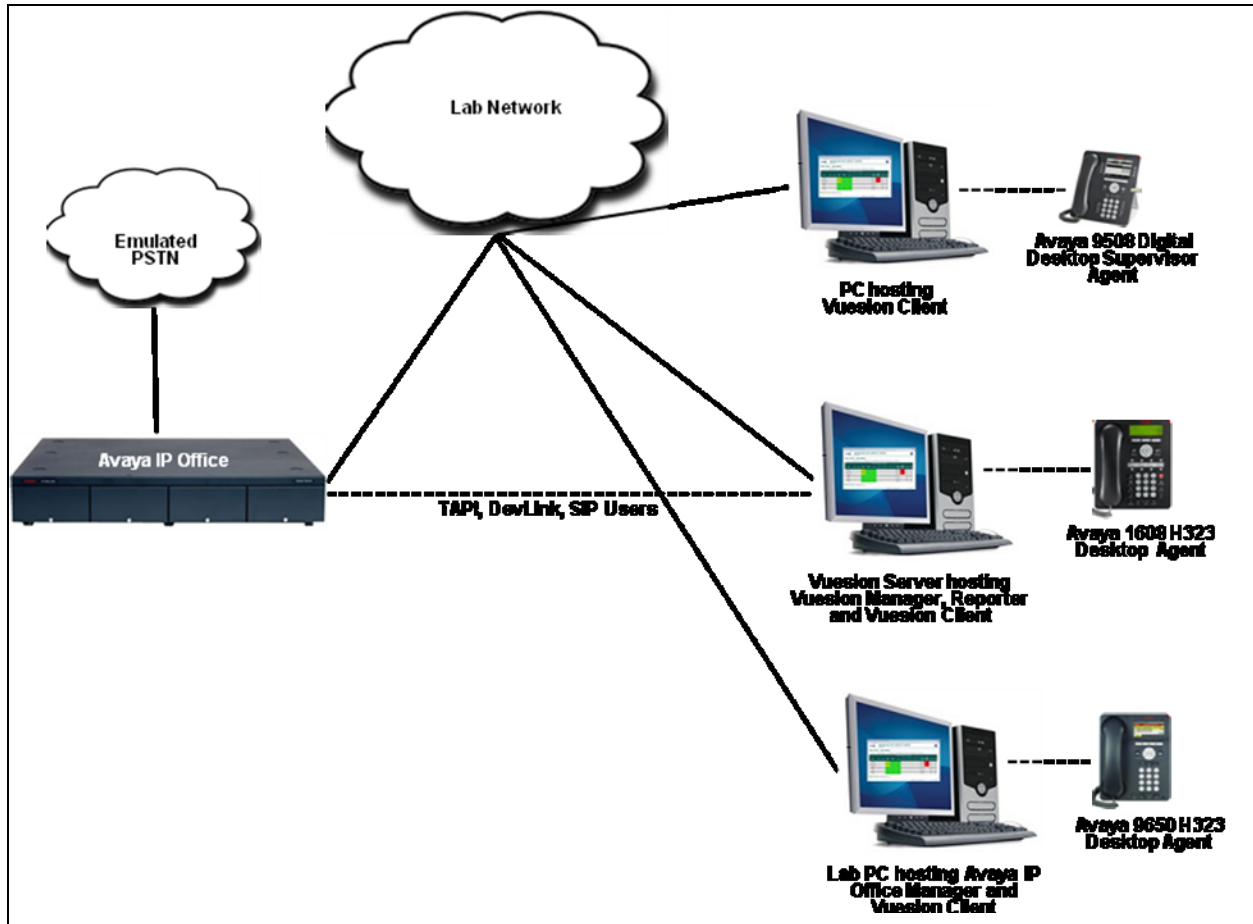
Technical support on BBX Technologies Vuesion Multimedia Contact Center can be obtained through the following:

- **Phone:** (800) 930-4229, option 4
- **Email:** bbxservice@bbxtech.com
- **Web:** www.bbxtech.com

3. Reference Configuration

The configuration used for the compliance testing is shown below. The Avaya IP Office Voicemail Pro was used for the voicemail call scenarios.

In the compliance testing, the Vuesion Manager, Vuesion Reports and Vuesion Client software were running on the Vuesion server, while another Vuesion Client was running on the server that was hosting the Avaya IP Office Manager.



4. Equipment and Software Validated

The following equipment and software were used for the sample configuration provided:

Equipment	Software
Avaya IP Office 500	8.0 (13)
Avaya IP Office Manager	8.0 (13)
Avaya 9650 IP Telephone (H.323)	3.186a
Avaya 1608 IP Telephone (H.323)	1.300B
Avaya 9508 Digital Telephone	N/A
BBX Technologies Vuesion Server on Windows 2008 Server R2 Standard <ul style="list-style-type: none">• Vuesion Reports• Avaya TAPI (tspi2w.tsp)• Avaya DevLink (devlink.dll)	V7.00 Revision 13 1.0.0.35 1.0.0.5
BBX Technologies Vuesion Client	V7.00

5. Configure Avaya IP Office

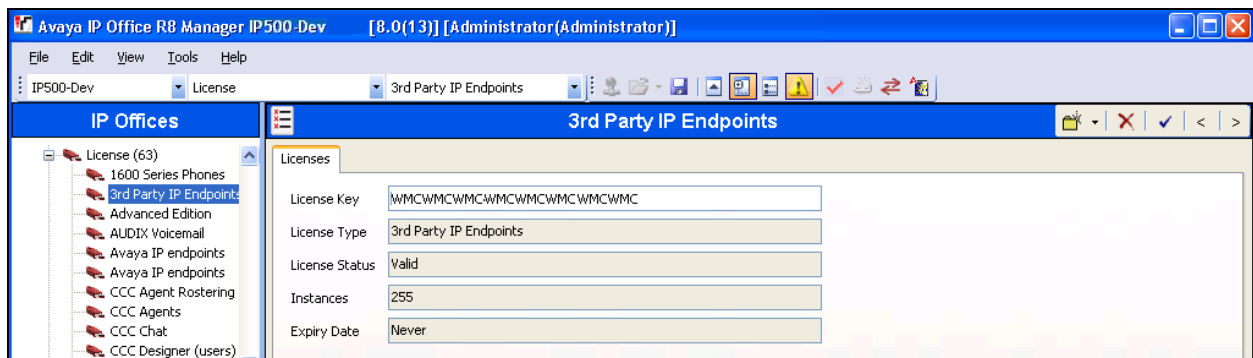
This section provides the procedures for configuring Avaya IP Office. The procedures include the following areas:

- Verify IP Office license
- Obtain LAN IP address
- Administer SIP Registrar
- Administer SIP extensions
- Administer SIP users
- Administer hunt groups
- Administer agents
- Administer supervisors
- Administer incoming call route
- Administer short code

5.1. Verify IP Office License

From a PC running the Avaya IP Office Manager application, select **Start > Programs > IP Office > Manager** to launch the Manager application. Select the proper IP Office system, and log in with the appropriate credentials.

The **Avaya IP R8 Office Manager** screen is displayed. From the configuration tree in the left pane, select **License > 3rd Party IP End-points** to display the **3rd Party IP End-points** screen in the right pane. Verify that the **License Status** is “Valid”.



IP Offices

License (63)

1600 Series Phones

3rd Party IP Endpoints

Advanced Edition

AUDIX Voicemail

Avaya IP endpoints

Avaya IP endpoints

CCC Agent Rostering

CCC Agents

CCC Chat

CCC Designer (users)

CCC EMail

CCC PC Wallboards

CCC Server

CCC Spectrum Wallbo.

CCC Supervisors

CCR CCC UPG

CCR Designer

CCR SUP

Compact Business Cer

CTI Link Pro

Customer Service Age

Customer Service Sup

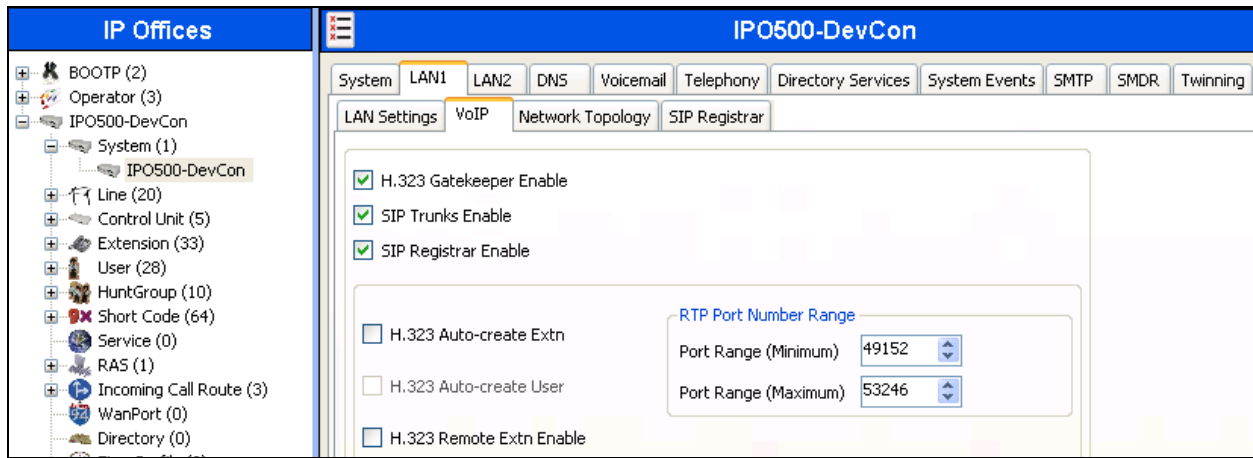
Licenses

License Key	HzhHzhHzhHzhHzhHzhHzhHzhHzhHzhHzh
License Type	CTI Link Pro
License Status	Valid
Instances	255
Expiry Date	Never

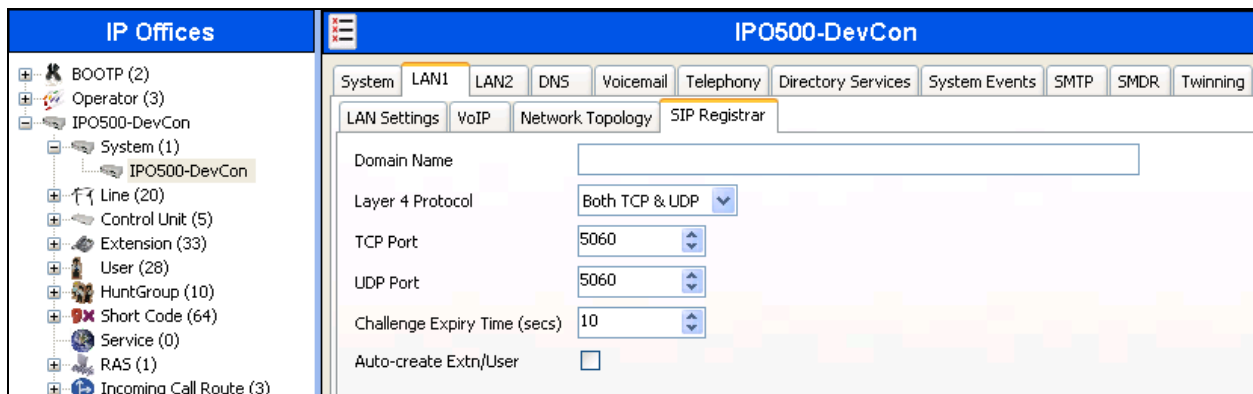
From the configuration tree in the left pane, select **System** to display the **IP500-DevCon** screen in the right pane. Select the **LAN1** tab, followed by the **LAN Settings** sub-tab in the right pane. Make a note of the **IP Address**, which will be used later to configure Vuesion. Note that IP Office can support SIP on the LAN1 and/or LAN2 interfaces, and the compliance testing used the LAN1 interface.

5.3. Administer SIP Registrar

Select the **VoIP** sub-tab. Make certain that **SIP Registrar Enable** is checked, as shown below.



Select the **SIP Registrar** sub-tab, and enter a valid **Domain Name** for SIP endpoints to use for registration with IP Office. In the compliance testing, the **Domain Name** was left blank, so the LAN IP address was used for registration.



5.4. Administer SIP Extensions

From the configuration tree in the left pane, right-click on **Extension**, and select **New > SIP Extension** from the pop-up list to add a new SIP extension. Enter the desired digits for **Base Extension**, and retain the default values in the remaining fields. Figure below shows the added SIP extension.

The screenshot shows the 'SIP Extension: 8000 28000' configuration window. The left pane shows a tree of extensions under 'IP Offices'. The main pane has tabs for 'Extn', 'VoIP', and 'T38 Fax'. The 'Extn' tab is active, showing fields for 'Extension Id' (8000), 'Base Extension' (28000), 'Caller Display Type' (On), 'Reset Volume After Calls' (unchecked), 'Device type' (Unknown SIP device), 'Module' (0), 'Port' (0), and 'Force Authorization' (checked).

Select the **VoIP** tab. Uncheck **Re-invite Supported**, and check **Use Offerer's Preferred Codec** and **Reserve 3rd party IP endpoint license**, as shown below. Retain the default values in the remaining fields.

Repeat this section to add the desired number of SIP extensions. In the compliance testing, four SIP extensions with base extensions of 28000-28003 were created.

The screenshot shows the 'SIP Extension: 8000 28000' configuration window with the 'VoIP' tab selected. The 'IP Address' field is set to '0 . 0 . 0 . 0'. The 'Codec Selection' dropdown is set to 'System Default'. The 'Unused' list is empty, and the 'Selected' list contains: G.711 ULAW 64K, G.711 ALAW 64K, G.729(a) 8K CS-ACELP, and G.723.1 6K3 MP-MLQ. The 'Fax Transport Support' dropdown is set to 'None'. The 'TDM->IP Gain' dropdown is set to 'Default'. The 'IP->TDM Gain' dropdown is set to 'Default'. The 'DTMF Support' dropdown is set to 'RFC2833'. On the right, the 'VoIP Silence Suppression' checkbox is unchecked, 'Local Hold Music' is unchecked, 'Allow Direct Media Path' is checked, 'Re-invite Supported' is unchecked, 'Use Offerer's Preferred Codec' is checked, 'Reserve Avaya IP endpoint license' is unchecked, and 'Reserve 3rd party IP endpoint license' is checked.

5.5. Administer SIP Users

From the configuration tree in the left pane, right-click on **User**, and select **New** from the pop-up list. For **Name** and **Full Name**, enter the same desired value prefixed with “IVR”, as required by Vuesion. For **Extension**, enter the first SIP base extension from **Section 5.4**. Figure below shows the added SIP user.

The screenshot shows the Vuesion configuration interface. On the left, the 'IP Offices' tree is expanded to 'User (28)'. The right pane shows the 'User' configuration page for 'IVR 28000: 28000'. The 'User' tab is selected, showing fields for Name, Password, Confirm Password, Full Name, Extension, Locale, Priority, System Phone Rights, Profile, and Device. The 'Device' field is set to 'Unknown SIP device'.

Select the **Voicemail** tab, and uncheck **Voicemail On**, as shown below.

The screenshot shows the Vuesion configuration interface. On the left, the 'IP Offices' tree is expanded to 'User (28)'. The right pane shows the 'Voicemail' configuration page for 'IVR 28000: 28000'. The 'Voicemail' tab is selected, showing fields for Voicemail Code, Confirm Voicemail Code, Voicemail Email, and Voicemail Email options. The 'Voicemail On' checkbox is unchecked.

Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab. Enter a desired **Login Code**.

Repeat this section to add a new user for each SIP extension from **Section 5.4**. In the compliance testing, four users with extensions of 28000-28003 were created.

The screenshot displays the Avaya IP Office configuration interface. On the left, the 'IP Offices' tree shows a hierarchy with 'User (28)' expanded, listing various extensions including 28000. The main panel is titled 'IVR 28000: 28000' and contains several tabs: 'User', 'Voicemail', 'DND', 'ShortCodes', 'Source Numbers', 'Telephony' (selected), 'Forwarding', 'Dial In', 'Voice Recording', and 'Button Programming'. Within the 'Telephony' tab, the 'Supervisor Settings' sub-tab is active. The configuration fields include: 'Login Code' set to '****'; 'Login Idle Period (secs)' as an empty field; 'Monitor Group' and 'Coverage Group' both set to '<None>'; 'Status on No-Answer' set to 'Logged On (No change)'; a 'Reset Longest Idle Time' section with 'All Calls' selected; and 'After Call Work Time (secs)' set to 'System Default (10)'. On the right side of the settings, several checkboxes are visible: 'Force Login', 'Force Account Code', 'Outgoing Call Bar', 'Inhibit Off-Switch Forward/Transfer', 'Can Intrude', 'Cannot be Intruded' (checked), 'Can Trace Calls', 'CCR Agent', and 'Automatic After Call Work'.

5.6. Administer Hunt Groups

Administer three hunt groups for the following purposes:

- Main hunt group for delivering of incoming trunk calls to Vuesion.
- Monitor hunt group for supervisor monitoring of agents.
- Transfer hunt group for use by Vuesion for internal transfers.

5.6.1. Administer Main Hunt Group

From the configuration tree in the left pane, right-click on **HuntGroup** and select **New** from the pop-up list to add a new hunt group. This hunt group will be used to deliver incoming trunk calls to Vuesion.

Enter desired values for **Name** and **Extension**. For **Ring Mode**, select “Rotary” from the drop-down list. Retain the default values in the remaining fields

In the **User List** section, add the desired number of virtual SIP users from **Section 5.5** as members. In the compliance testing, 28000 and 28001 were added as members as shown below.

The screenshot displays the Avaya configuration interface. On the left, the 'IP Offices' tree shows a hierarchy with '77100 BBX Main' selected. The main configuration area on the right is titled 'Rotary Group BBX Main: 77100'. It features several tabs: 'Hunt Group' (active), 'Queuing', 'Overflow', 'Fallback', 'Voicemail', 'Voice Recording', 'Announcements', and 'SIP'. The 'Hunt Group' tab contains the following fields:

- Name:** BBX Main
- Extension:** 77100
- Ring Mode:** Rotary (selected from a dropdown)
- No Answer Time (secs):** System Default (15)
- Hold Music Source:** No Change (selected from a dropdown)
- Agent's Status on No-Answer Applies To:** None (selected from a dropdown)
- ☐ CCR Agent Group

Below these fields is the 'User List' section, which contains a table with two members:

Extension	Name
28000	IVR 28000
28001	IVR 28001

Select the **Voicemail** tab, and uncheck **Voicemail On**.

The screenshot shows the 'Rotary Group BBX Main: 77100' configuration page. The 'Voicemail' tab is selected. On the left, the 'IP Offices' list includes: 30 230, 31 231, 32 232, 8000 28000, 8001 28001, 8002 28002, 8003 28003, 8006 28004, 8007 28005, 8008 28006, 8004 28007, 8005 28008, User (28), HuntGroup (10), and 77100 BBX Main. The main configuration area has the following fields and options:

- Voicemail Code**: [Text Field]
- Confirm Voicemail Code**: [Text Field]
- Voicemail Email**: [Text Field]
- Voicemail Email** (Action): ☒ Off, ☐ Copy, ☐ Forward, ☐ Alert
- ☐ **Voicemail On**
- Voicemail Answer Time (secs)**: [Text Field]
- ☐ **Voicemail Help**
- ☐ **Broadcast**
- ☐ **UMS Web Services**

Select the **Queuing** tab, and uncheck **Queuing On**.

The screenshot shows the 'Rotary Group BBX Main: 77100' configuration page. The 'Queuing' tab is selected. The 'IP Offices' list on the left is identical to the previous screenshot. The main configuration area has the following fields and options:

- ☐ **Queuing On**
- Queue Length**: [No Limit] [Dropdown], ☒ **Normalize Queue Length**
- Queue Type**: [Assign Call On Agent Answer] [Dropdown]
- Calls In Queue Alarm**:
 - Calls In Queue Threshold**: [1] [Dropdown]
 - Analog Extension to Notify**: [<None>] [Dropdown]

5.6.2. Administer Monitor Hunt Group

From the configuration tree in the left pane, right-click on **HuntGroup** and select **New** from the pop-up list to add a new hunt group. This hunt group will be used for supervisor monitoring of agents.

Enter desired values for **Name** and **Extension**, and retain the default values in the remaining fields.

In the **User List** section, add the agent users as members. In the compliance testing, 28004 and 28005 were added as members as shown below.

IP Offices

- 30 230
- 31 231
- 32 232
- 8000 28000
- 8001 28001
- 8002 28002
- 8003 28003
- 8006 28004
- 8007 28005
- 8008 28006
- 8004 28007
- 8005 28008
- +
- User (28)
- HuntGroup (10)
- 77100 BBX Main
- 77200 BBX Monitor

Sequential Group BBX Monitor: 77200

Hunt Group Queuing Overflow Fallback Voicemail Voice Recording Announcements SIP

Name: BBX Monitor ☐ CCR Agent Group

Extension: 77200

Ring Mode: Sequential No Answer Time (secs): System Default (15)

Hold Music Source: No Change

Agent's Status on No-Answer Applies To: None

User List

Extension	Name
<input checked="" type="checkbox"/> 28004	Extn28004 9608
<input checked="" type="checkbox"/> 28005	Extn28005 9608

5.6.3. Administer Transfer Hunt Group

From the configuration tree in the left pane, right-click on **HuntGroup** and select **New** from the pop-up list to add a new hunt group. This hunt group will be used by Vuesion for internal transfers.

Enter desired values for **Name** and **Extension**, and retain the default values in the remaining fields.

In the **User List** section, add the desired number of virtual SIP users from **Section 5.5** as members. In the compliance testing, 28000 to 28003 were added as members as shown below.

Follow the procedures in **Section 5.6.1** to uncheck **Voicemail On** and **Queuing On**.

The screenshot shows the Avaya configuration interface for a 'Sequential Group CustomerSupport: 77300'. The left pane shows the 'IP Offices' tree with 'HuntGroup (10)' expanded, showing '77300 CustomerSupp'. The right pane shows the configuration for the 'Hunt Group' with the following settings:

- Name: CustomerSupport
- Extension: 77300
- Ring Mode: Sequential
- Hold Music Source: No Change
- Agent's Status on No-Answer Applies To: None
- No Answer Time (secs): System Default (15)
- CCR Agent Group: ☐

The 'User List' section shows a table of members:

Extension	Name
<input checked="" type="checkbox"/> 28000	IVR 28000
<input checked="" type="checkbox"/> 28001	IVR 28001
<input checked="" type="checkbox"/> 28002	IVR 28002
<input checked="" type="checkbox"/> 28003	IVR 28003

5.7. Administer Agents

From the configuration tree in the left pane, select the first agent user, in this case “28004”.

Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab. Uncheck **Cannot be Intruded**, as shown below.

Repeat this section for all agent users. In the compliance testing, two agent users with extensions 28004 and 28005 were configured.

The screenshot displays the Avaya configuration interface. On the left, a tree view under 'IP Offices' shows a list of users, with '28004 Extn28004 960' selected. The main panel is titled 'Extn28004 9608: 28004' and contains several tabs: 'User', 'Voicemail', 'DND', 'ShortCodes', 'Source Numbers', 'Telephony' (selected), 'Forwarding', 'Dial In', 'Voice Recording', and 'Button Prog'. Within the 'Telephony' tab, the 'Supervisor Settings' sub-tab is active. This sub-tab contains the following settings:

- Login Code:** [Empty text field]
- Login Idle Period (secs):** [Empty text field]
- Monitor Group:** [BBX Monitor (dropdown menu)]
- Coverage Group:** [<None> (dropdown menu)]
- Status on No-Answer:** [Logged On (No change) (dropdown menu)]
- Reset Longest Idle Time:** [All Calls (radio button selected), External Incoming (radio button unselected)]
- After Call Work Time (secs):** [System Default (10) (dropdown menu)]

On the right side of the 'Supervisor Settings' sub-tab, there are several checkboxes:

- ☐ Force Login
- ☐ Force Account Code
- ☐ Outgoing Call Bar
- ☒ Inhibit Off-Switch Forward/Transfer
- ☐ Can Intrude
- ☐ Cannot be Intruded
- ☐ Can Trace Calls
- ☐ CCR Agent
- ☐ Automatic After Call Work

5.8. Administer Supervisors

From the configuration tree in the left pane, select the first supervisor user that will be monitoring agents, in this case “201”.

Select the **Telephony** tab, followed by the **Supervisor Settings** sub-tab. For **Monitor Group**, select the Monitor hunt group from **Section 5.6.2**. Check **Can Intrude** and **Cannot be Intruded**.

Repeat this section for all supervisors that will be monitoring agents. In the compliance testing, one supervisor user with extension 201 was configured, as shown below.

The screenshot displays the Avaya configuration interface. On the left, the 'IP Offices' tree shows a hierarchy: Control Unit (5) > Extension (33) > User (28). Under 'User (28)', the user '201 Extn201 9508D' is selected. The main panel is titled 'Extn201 9508D: 201' and contains several tabs: User, Voicemail, DND, ShortCodes, Source Numbers, Telephony (selected), Forwarding, Dial In, Voice Recording, and Button Program. Within the 'Telephony' tab, the 'Supervisor Settings' sub-tab is active. This sub-tab contains the following settings:

- Login Code:** [Empty text field]
- Login Idle Period (secs):** [Empty text field]
- Monitor Group:** BBX Monitor (dropdown menu)
- Coverage Group:** <None> (dropdown menu)
- Status on No-Answer:** Logged On (No change) (dropdown menu)
- Reset Longest Idle Time:** All Calls (radio button selected), External Incoming (radio button unselected)
- After Call Work Time (secs):** System Default (10) (dropdown menu)
- Force Login:** [Unchecked checkbox]
- Force Account Code:** [Unchecked checkbox]
- Outgoing Call Bar:** [Unchecked checkbox]
- Inhibit Off-Switch Forward/Transfer:** [Unchecked checkbox]
- Can Intrude:** [Checked checkbox]
- Cannot be Intruded:** [Checked checkbox]
- Can Trace Calls:** [Unchecked checkbox]
- CCR Agent:** [Unchecked checkbox]
- Automatic After Call Work:** [Unchecked checkbox]

5.9. Administer Incoming Call Route

If necessary, create an incoming call route to route incoming calls to the Main hunt group. In the compliance testing, a SIP line “17” was created for incoming route

As shown in the screen below, the **Line Group ID** of “17” is selected.

The screenshot displays the IP Office configuration interface. On the left, a tree view under 'IP Offices' shows the hierarchy: BOOTP (2), Operator (3), IPO500-DevCon, System (1), IPO500-DevCon, Line (20), Control Unit (5), Extension (33), User (28), HuntGroup (10), Short Code (64), Service (0), RAS (1), and Incoming Call Route (3). Under Incoming Call Route, three options are listed: 18, 0, and 17. Option 17 is selected. The main panel shows the configuration for Line Group ID 17. The 'Standard' tab is active, showing fields for Bearer Capability (Any Voice), Line Group ID (17), Incoming Number, Incoming Sub Address, Incoming CLI, Locale, Priority (1 - Low), Tag, and Hold Music Source (System Source).

In the **Destinations** tab, the use of “.” in the **Destination** field enables the routing to reach all extensions in the IP Office.

If desired, the Main hunt group can be selected from the **Destination** drop-down to route all incoming trunk calls to Vuesion.

The screenshot displays the IP Office configuration interface, specifically the 'Destinations' tab for Line Group ID 17. The left tree view is identical to the previous screenshot, with '17' selected under Incoming Call Route. The main panel shows the 'Destinations' tab with a table containing three columns: TimeProfile, Destination, and Fallback Extension. The first row shows 'Default Value' in the TimeProfile column, a period (.) in the Destination column, and a dropdown menu in the Fallback Extension column.

5.10. Administer Short Code

From the configuration tree in the left pane, right-click on **Short Code** and select **New** from the pop-up list to add a new short code for Call Listen. Configure the fields as shown below in the right pane.

Note that the short code has to be “*8”, as required by Vuesion during compliance testing. This short code will be used by the Vuesion server to support supervisor monitoring of agents.

The screenshot displays the Vuesion configuration interface. On the left, the 'IP Offices' pane lists various short codes, with '*8*N#' selected at the bottom. The right pane, titled '*8*N#: Call Listen', shows the configuration for this short code. The 'Short Code' tab is active, displaying the following fields:

Field	Value
Code	*8*N#
Feature	Call Listen
Telephone Number	N
Line Group ID	0
Locale	
Force Account Code	<input type="checkbox"/>

6. Configure BBX Technologies Vuesion Multimedia Contact Center

This section provides the procedures for configuring the Vuesion server. The procedures include the following areas:

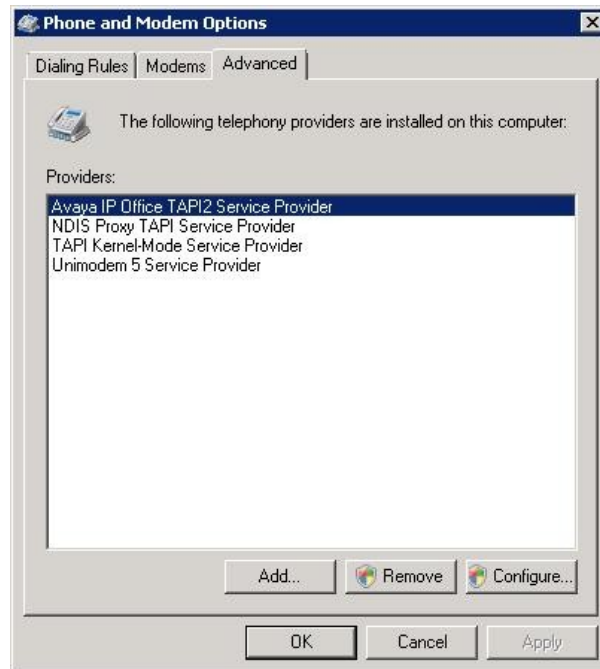
- Administer TAPI driver
- Administer Switch.txt
- Stop service
- Launch Vuesion Manager
- Administer communication settings
- Administer local extensions
- Administer tenants
- Administer VMAIL extensions
- Administer queues sizing
- Administer ACD members
- Administer ACD groups
- Administer trunks
- Start service

The configuration of the Vuesion server is typically performed by BBX Technologies technicians. The procedural steps are presented in these Application Notes for informational purposes.

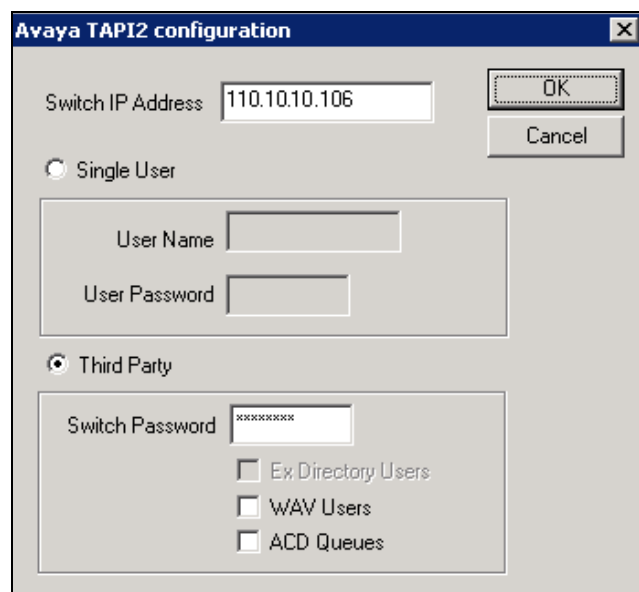
In addition to the shown procedural steps, the application also requires the auto attendant, and the class of service for the agents and supervisors be configured by following reference [2].

6.1. Administer TAPI Driver

From the Vuesion server, select **Start > Control Panel**, and click on the **Phone and Modem** icon (not shown below). In the **Phone and Modem Options** screen, select the **Advanced** tab. Select the **Avaya IP Office TAPI2 Service Provider** entry, and click **Configure**.

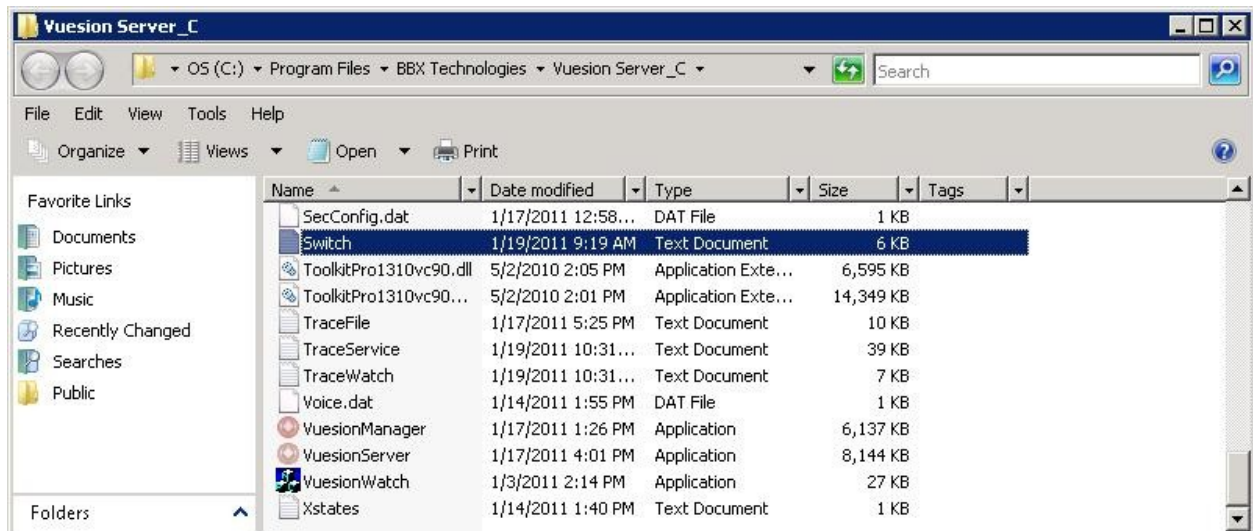


The **Avaya TAPI2 configuration** screen is displayed. For **Switch IP Address**, enter the IP address of Avaya IP Office. Select the radio button for **Third Party**, and enter the IP Office password into the **Switch Password** field. Reboot the Vuesion server.

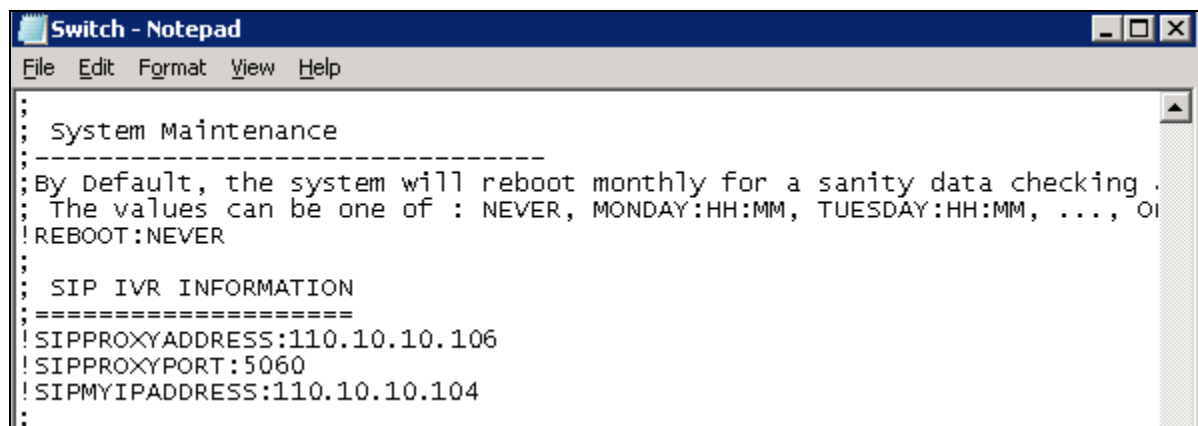


6.2. Administer Switch.txt

Navigate to the **C:\Program Files\BBX Technologies\Vuesion Server_C** directory to locate the **Switch** text file shown below.

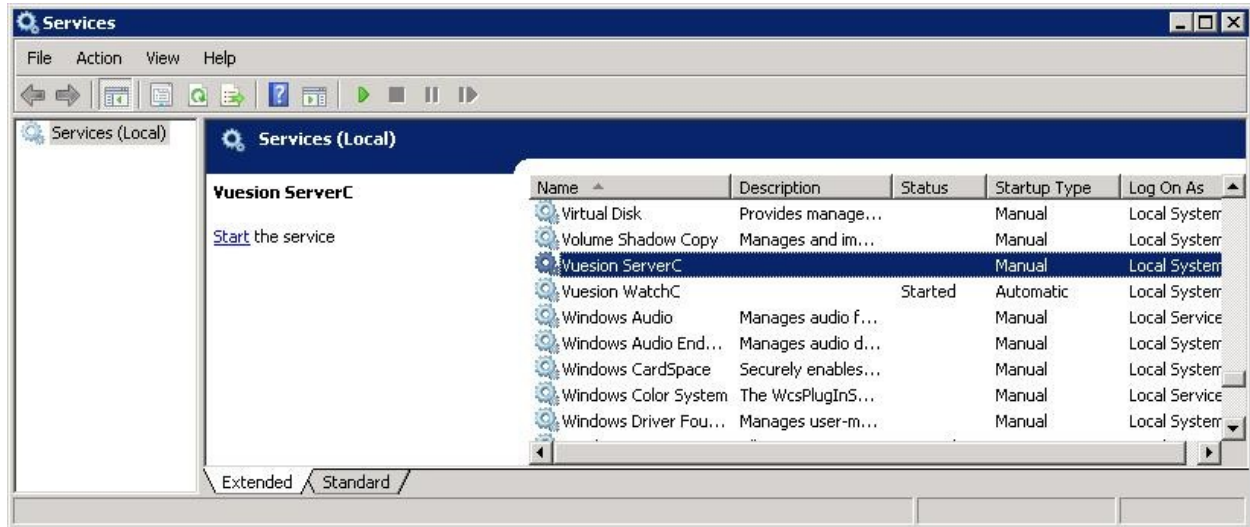


Open the **Switch** text file with the Notepad application. For **SIPPROXYADDRESS**, enter the IP address of IP Office from **Section 5.2**. For **SIPPROXYPORT**, enter the UDP port number from **Section 5.3**. For **SIPMYIPADDRESS**, enter the IP address of the local Ethernet interface used for connectivity with IP Office, in this case "110.10.10.104".



6.3. Stop Service

Select **Start > Control Panel > Administrative Tools > Services**, to display the **Services** screen. Navigate to the **Vuesion ServerC** entry, right-click on the entry and select **Stop**.



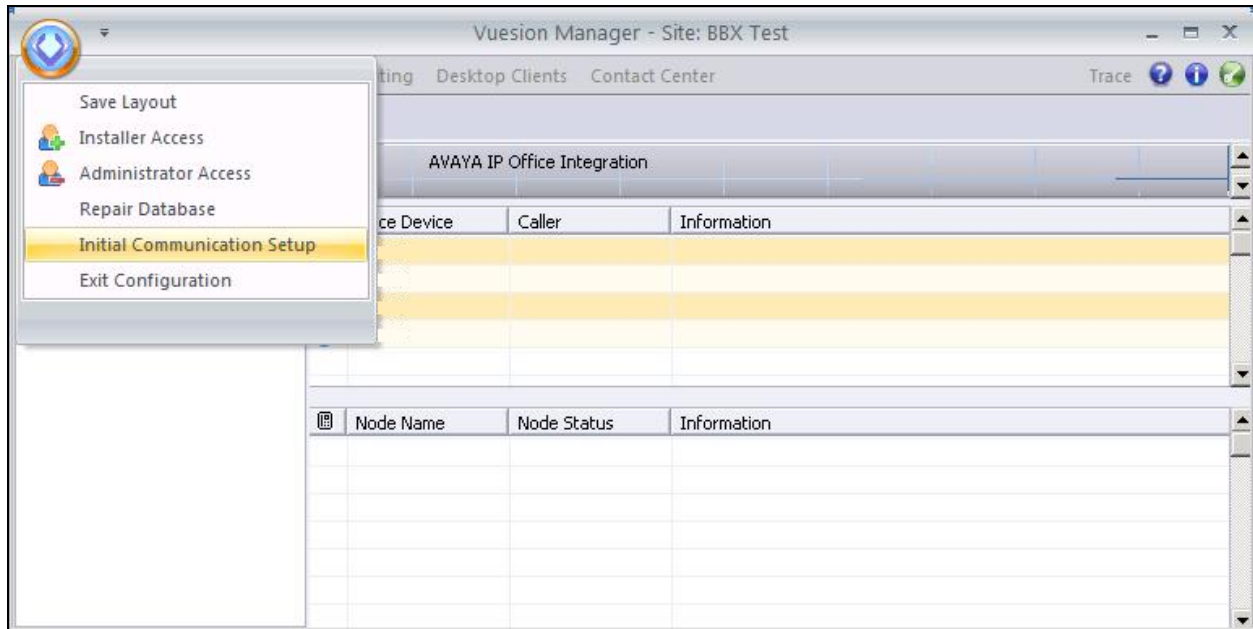
6.4. Launch Vuesion Manager

From the Vuesion server, double-click the **VuesionManager** icon shown on the desktop, which was created as part of installation.



6.5. Administer Communication Settings

The **Vuesion Manager** screen is displayed. Click on the icon in the top left corner, and select **Initial Communication Setup** from the drop-down list.



The **VuesionServer** dialog box is displayed, click **OK**



The **COMMUNICATION SETTINGS** screen is displayed next. Check **IP Enabled**. Enter the IP address and password for IP Office in **PBX IP Addr** and **PBX Password**, and retain the default values in the remaining fields.

COMMUNICATION SETTINGS

SWITCH COMMUNICATION

RS232 Port to: BaudRate:

☒ IP Enabled

PBX IP Addr:

PBX Password:

PBX SMDR IP Address:

PBX SMDR TCP Port:

NETWORKING SETUP: MASTER SERVER

NetServer IP address:

NetServer IP Port:

THIS SERVER DEFINITION

Customer Location Name:

This Server IP address:

This Server IP Port:

VoiceMail Location:

VoiceMail Pilot Number:

OK

6.6. Administer Local Extensions

The **Vuesion Manager** screen is displayed again. Select **Switch Setup > Local Extensions** from the left pane.

Vuesion Manager - Site: Devconnect

Switch Setup Messaging Routing Desktop Clients Contact Center Trace ? i

Switch Setup

- Communication
- Local Extensions
- Off Premise Extensions
- Phantom Extensions
- Park Orbits
- Hold Extensions
- Area Paging
- Trunks
- Reload Switch Info

Messaging/IVR

Routing

Desktop Clients

Contact Center

AVAYA IP Office Integration

Voice Device	Caller	Information

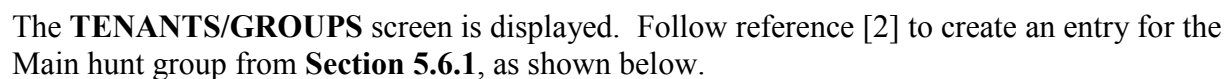
Record Device	Recording	Information

Node Name	Node Status	Information

Update the **Full Name** field as desired, and retain the default values in the remaining fields. Note that the port numbers are automatically assigned by the system subsequently.

RS; Reviewed:
SPOC 2/13/2012

From the **Vuesion Manager** screen, select **Messaging/IVR > Tenants** from the left pane.

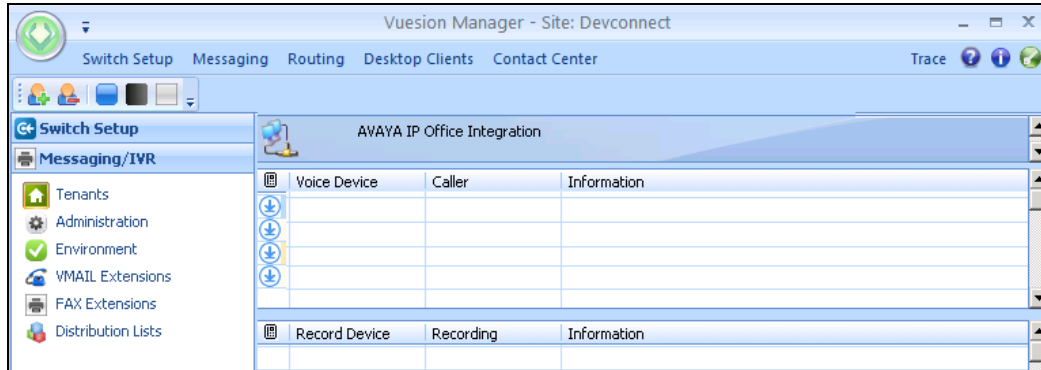
[illegible]

The **Selected Tenant** screen is displayed. Select the applicable entries in the **Available User List** section, and click the double-left-arrow to move the entries to the **Tenant/Group Members List** section, as shown below. In this case, all entries were selected.

[illegible]

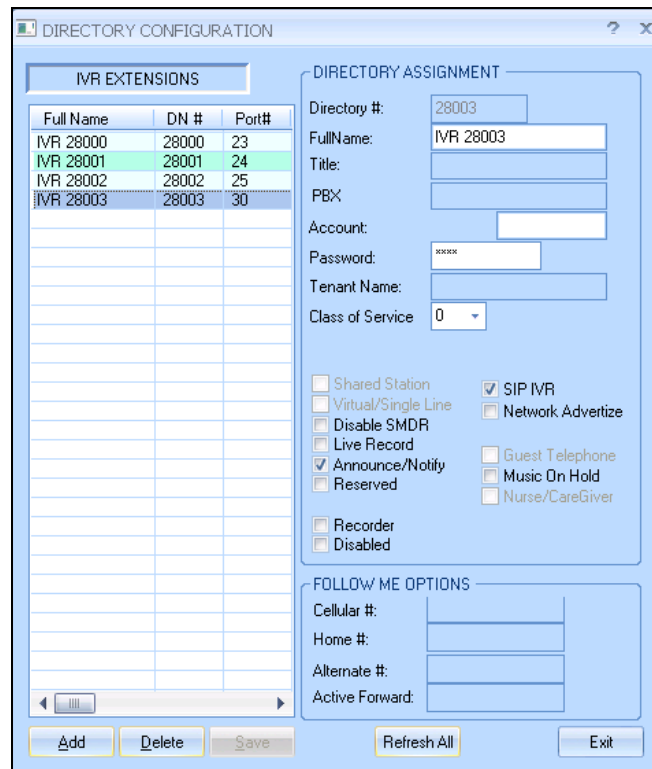
6.8. Administer VMAIL Extensions

From the **Vuesion Manager** screen, select **Messaging/IVR > VMAIL Extensions** from the left pane.



The **DIRECTORY CONFIGURATION** screen is displayed. Follow reference [2] to create an entry for each virtual SIP user from **Section 5.5**, as shown below.

For **Full Name**, enter the SIP user name from **Section 5.5**. For **Password**, enter the SIP user login code from **Section 5.5**. Check **SIP**. Check **Announce/Notify** to all of the virtual SIP users, in this case users 28000 and 28003. Note that the port numbers are automatically assigned by the system subsequently.



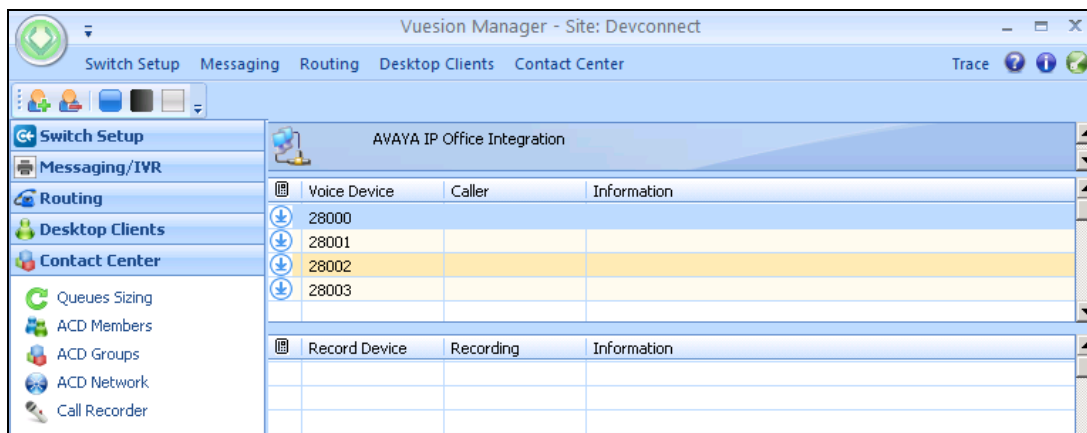
Full Name	DN #	Port#
IVR 28000	28000	23
IVR 28001	28001	24
IVR 28002	28002	25
IVR 28003	28003	30

DIRECTORY ASSIGNMENT	
Directory #:	28003
FullName:	IVR 28003
Title:	
PBX:	
Account:	
Password:	XXXXXX
Tenant Name:	
Class of Service	0
<input type="checkbox"/> Shared Station	
<input type="checkbox"/> Virtual/Single Line	
<input type="checkbox"/> Disable SMDR	
<input type="checkbox"/> Live Record	
<input checked="" type="checkbox"/> Announce/Notify	
<input type="checkbox"/> Reserved	
<input type="checkbox"/> Recorder	
<input type="checkbox"/> Disabled	
<input checked="" type="checkbox"/> SIP IVR	
<input type="checkbox"/> Network Advertize	
<input type="checkbox"/> Guest Telephone	
<input type="checkbox"/> Music On Hold	
<input type="checkbox"/> Nurse/CareGiver	
FOLLOW ME OPTIONS	
Cellular #:	
Home #:	
Alternate #:	
Active Forward:	

Buttons: Add, Delete, Save, Refresh All, Exit

6.9. Administer Queues Sizing

From the **Vuesion Manager** screen, select **Contact Center > Queues Sizing** from the left pane.



The **DIRECTORY CONFIGURATION** screen is displayed. Follow reference [2] to create the desired number of entries for queuing of incoming ACD calls, as shown below.

The **DN #** are used by Vuesion to park and unpark the queued calls on IP Office, therefore use available extension numbers on IP Office.

Full Name	DN #	Port#
Queue	25551	0
Queue	25552	0
Queue	25553	0
Queue	25554	0
Queue	25555	0
Queue	25556	0
Queue	25557	0
Queue	25558	0
Queue	25559	0
Queue	25560	0

DIRECTORY ASSIGNMENT

Directory #:
FullName:
Title:
PBX:
Power-Up Destination:
Password:
Tenant Name:
Class of Service:

☐ Shared Station ☐ SIP
☐ Virtual/Single Line ☐ Network Advertise
☐ Disable SMDR
☐ Reserved ☐ Guest Telephone
☐ Recorder ☐ Music On Hold
☐ Disabled ☐ Nurse/CareGiver

FOLLOW-ME OPTIONS

Mobile #:
Home #:
Alternate #:
Active Forward:

6.11. Administer ACD Groups

From the **Vuesion Manager** screen shown in **Section 6.9**, select **Switch Setup > ACD Groups** from the left pane, to display the **SkillSets Administration** screen. Follow reference [2] to create an entry for the Transfer hunt group from **Section 6.6**, as shown below.

The **Voice Routing Options** section defines the parameters used for routing of ACD calls. The **Multimedia Contact Center Members Assignment** section defines the members and their skills level. The **Announcements** section defines the announcement treatments.

The screenshot below shows the values used in the compliance testing.

SkillSets Administration

Group ID: 77300, Group Name: Customer Support, Routing Method: Round Robin

Voice Routing Options

Enable: ☒ Priority: 00

Overflow Time: 01 Min

Overfl. Destination: 77300

Signed-Out OVF: 77300

All Busy Overflow:

Longest InQ Thr: 30 Sec

Force Priority: 00

Calls Queued Thr.: 02

Auto WrapUp @ 15 Sec

Ringback on Queue

Multimedia Contact Center Members Assignment

VoiceSkill: 00, EmailSkill: 00, FaxSkill: 00, OutdialSkill: 00

HandleVoice: ☐ HandleEmails: ☐ HandleFax: ☐ HandleOutdial: ☐

Name	ID	Type	Skill Lev
BBX Agent 1	50001	ACD Agent	09
BBX Agent 2	50002	ACD Agent	09
BBX Supervisor	50003	ACD Supervisor	09

Announcements

	QPosition	~ Hold	AA	Repeat	Frequency
1: AA	<input type="checkbox"/>	<input type="checkbox"/>	AA	Repeat	Never
2: AA	<input type="checkbox"/>	<input type="checkbox"/>	AA	Repeat	Never
3: AA	<input type="checkbox"/>	<input type="checkbox"/>	AA	Repeat	Never

Email Routing Options

Enable: ☐ Priority: 00

Subject Filter:

Overflow Time: 00

OVF Destination:

Signed-Out OVF:

EmailQ Threshold: 10

Longest InQ Thr: 300

Force Priority: 0

Fax Routing Options

Enable: ☐ Priority: 00

Overflow Time: 00

OVF Destination:

Signed-Out OVF:

FaxQ Threshold: 10

Longest InQ Thr: 300

Force Priority: 0

Outbound Campaign

Enable Campaign: ☐ Campaign Priority: 00

ODBC - DSN:

Table:

Password:

Login:

Name Field:

Phone Field:

Contact:

Priority Field:

Comment Field:

Resolution Field:

Restricted Hours During Schedule (Format: 12:00-13:00,...)

Enable Schedule: ☐ Timezone: (CST)

Start Datetime: 11/18/2011 8:00:00 AM

Stop Datetime: 11/18/2011 5:00:00 PM

M T W T F S S

Import Records Restart Campaign

Add Group Remove Group Save Exit

6.12. Administer Trunks

From the **Vuesion Manager** screen shown in **Section 6.96**, select **Switch Setup > Trunks** from the left pane, to display the **DIRECTORY CONFIGURATION** screen. Follow reference [2] to create sufficient entries for the SIP line from **Section 5.9**, as shown below.

For **Directory #**, use the value “xy”, where “x” is the line number and “y” is the channel number specified in two-digits. In this case, the line number is “1”, since Vuesion uses this for SIP line and the channel numbers are “01-23”. Retain the default values in the remaining fields.

The screenshot below shows the values used in the compliance test.

Full Name	DN #	Port#
Trunk101	101	
Trunk102	102	
Trunk103	103	
Trunk104	104	
Trunk105	105	
Trunk106	106	
Trunk107	107	
Trunk108	108	
Trunk109	109	
Trunk110	110	
Trunk111	111	
Trunk112	112	
Trunk113	113	
Trunk114	114	
Trunk115	115	
Trunk116	116	
Trunk117	117	
Trunk118	118	
Trunk119	119	
Trunk120	120	
Trunk121	121	
Trunk122	122	
Trunk123	123	

DIRECTORY ASSIGNMENT

Directory #: 101
FullName: Trunk101
Title:
PBX:
Account:
Password:
Tenant Name:
Class of Service: 0

☐ Shared Station ☐ SIP
☐ Virtual/Single Line ☒ Network Advertise
☐ Disable SMDR ☐ Guest Telephone
☐ Reserved ☐ Music On Hold
☐ Recorder ☐ Nurse/CareGiver
☐ Disabled

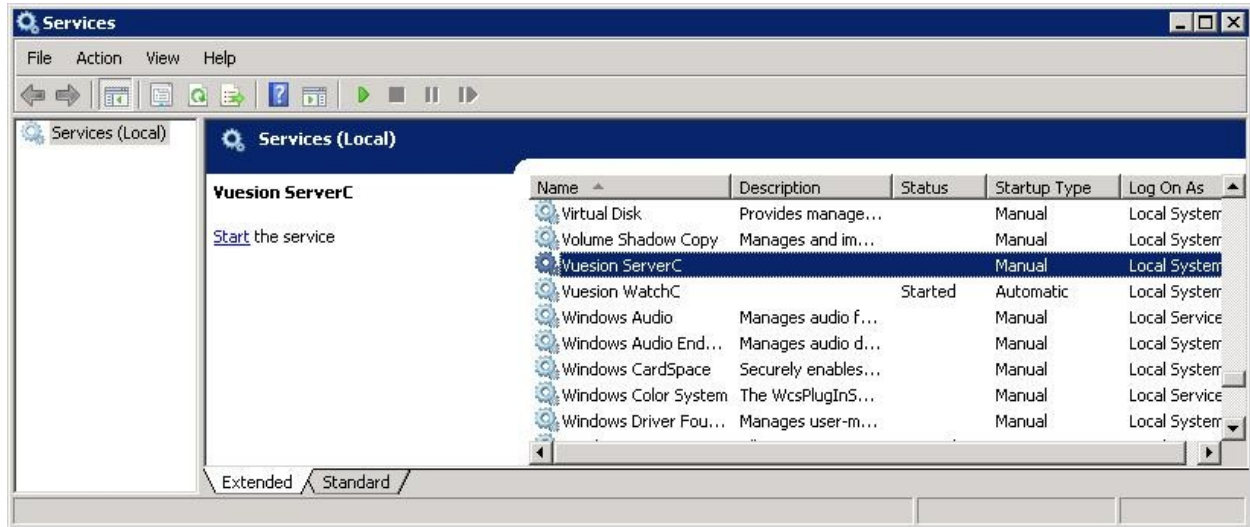
FOLLOW ME OPTIONS

Cellular #:
Home #:
Alternate #:
Active Forward:

Add Delete Save Refresh All Exit

6.13. Start Service

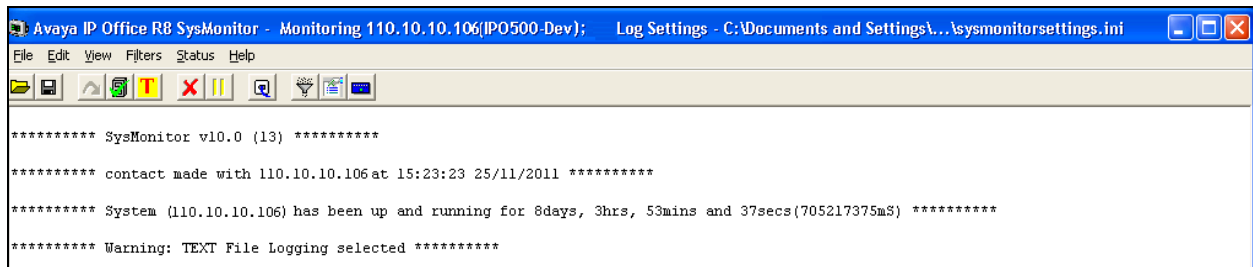
Select **Start > Control Panel > Administrative Tools > Services**, to display the **Services** screen. Navigate to the **Vuesion ServerC** entry, right-click on the entry and select **Start**.



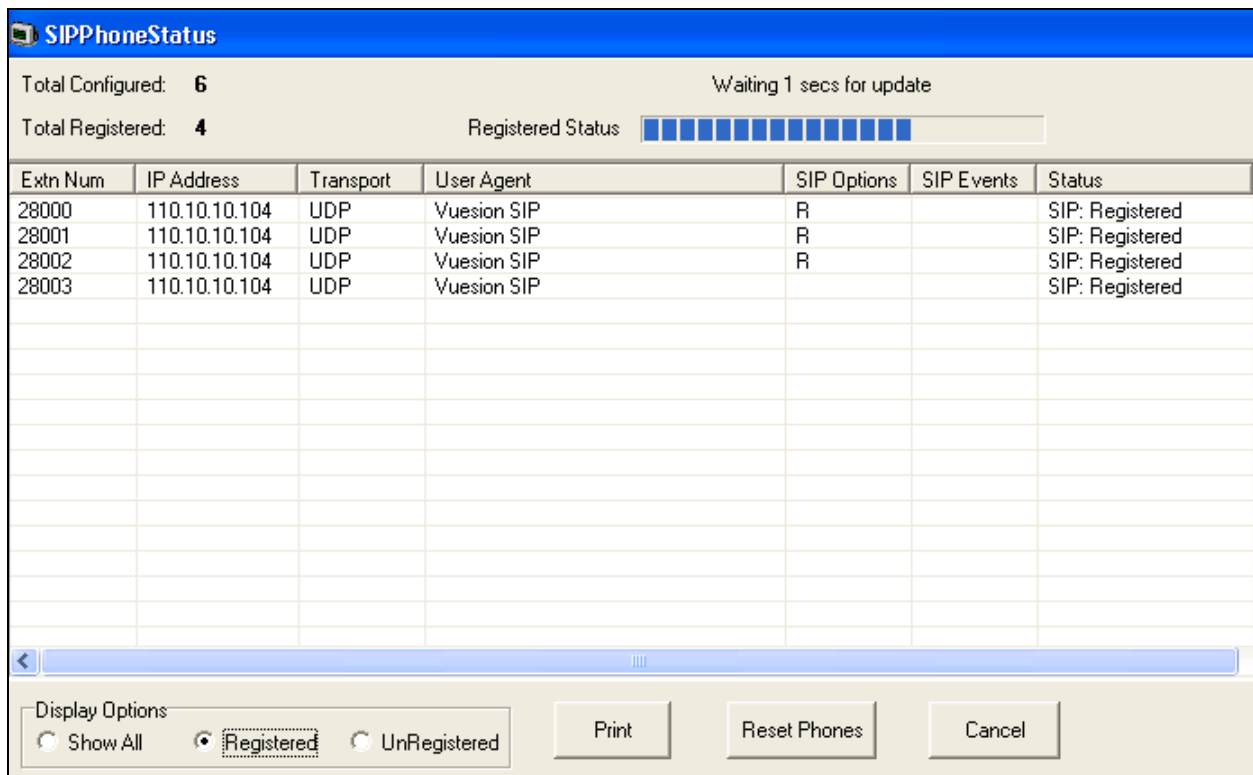
This section provides the tests that can be performed to verify proper configuration of Avaya IP Office and BBOX Technologies Vuesion Multimedia Contact Center.

7.1. Verify Avaya IP Office

From a PC running the Avaya IP Office Monitor application, select **Start > Programs > IP Office > Monitor** to launch the application. The **Avaya IP Office R8 SysMonitor** screen is displayed, as shown below. Select **Status > SIP Phone Status** from the top menu.



The **SIPPhoneStatus** screen is displayed. Verify that there is an entry for each virtual SIP user from **Section 5.5**, that the **User Agent** contains “Vuesion(R)SIP”, and that the **Status** is “SIP: Registered”, as shown below.



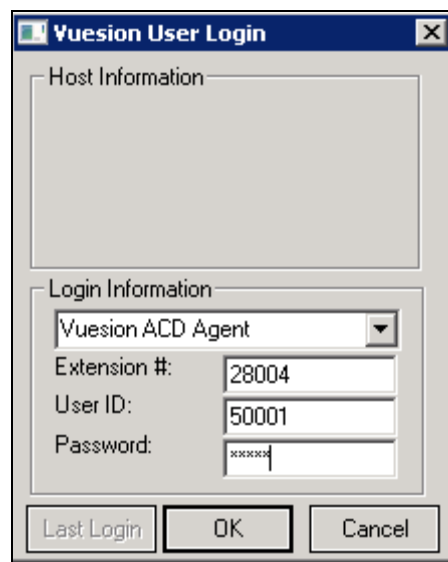
7.2. Verify BBX Technologies Vuesion Multimedia Contact Center

From the agent user PC running Vuesion Client, double-click on the **VuesionClient** icon shown on the desktop, which was created as part of installation.

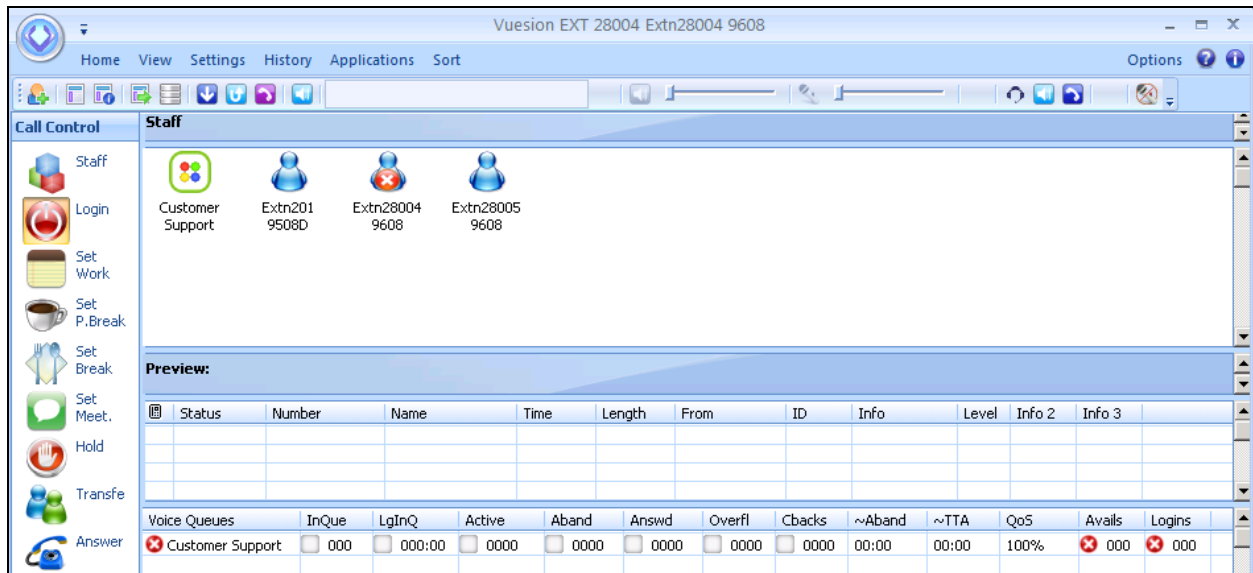


The **Vuesion User Login** screen is displayed. For **Login Information**, select “Vuesion ACD Agent” from the drop-down list.

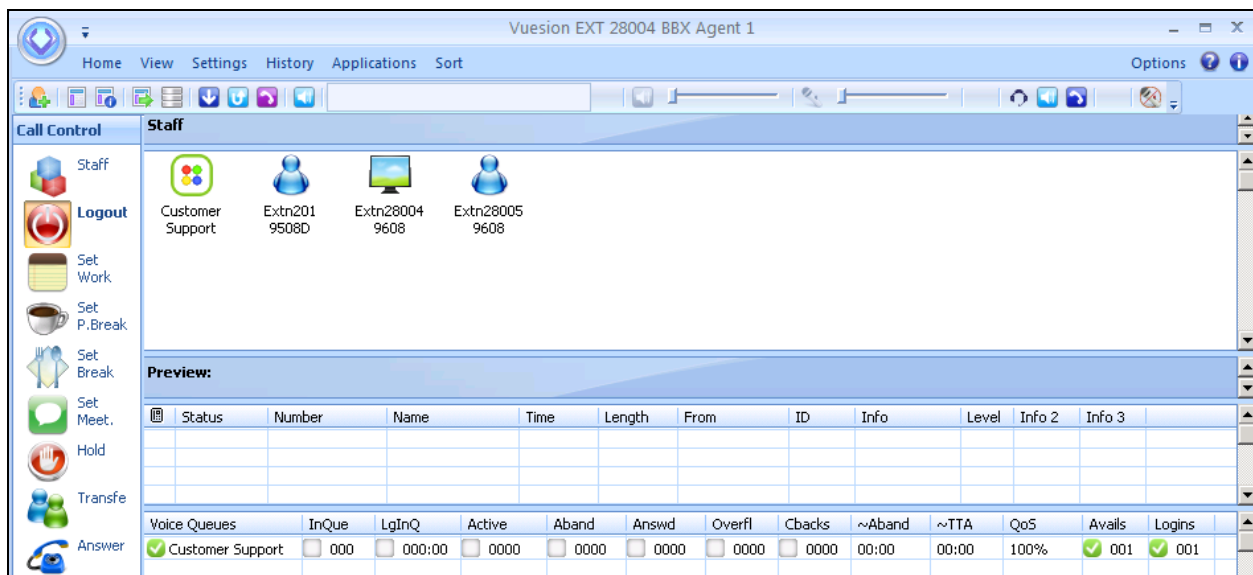
For **Extension #**, enter the extension number of the first agent user from **Section 6.6**. For **User ID** and **Password**, enter the corresponding credentials for the first agent user from **Section 6.10**, as shown below. During compliance testing one of the client was run from the Vuesion server and the Figure below shows that client.

A screenshot of the 'Vuesion User Login' dialog box. The dialog has a title bar with the text 'Vuesion User Login' and a close button. It contains two main sections: 'Host Information' and 'Login Information'. The 'Host Information' section is a large, empty rectangular area. The 'Login Information' section contains a dropdown menu with 'Vuesion ACD Agent' selected, and three text input fields labeled 'Extension #', 'User ID', and 'Password'. The 'Extension #' field contains the value '28004', the 'User ID' field contains '50001', and the 'Password' field contains 'xxxxx'. At the bottom of the dialog are three buttons: 'Last Login', 'OK', and 'Cancel'.

The **Vuesion** screen is displayed. Click on the **Login** icon from the left pane.

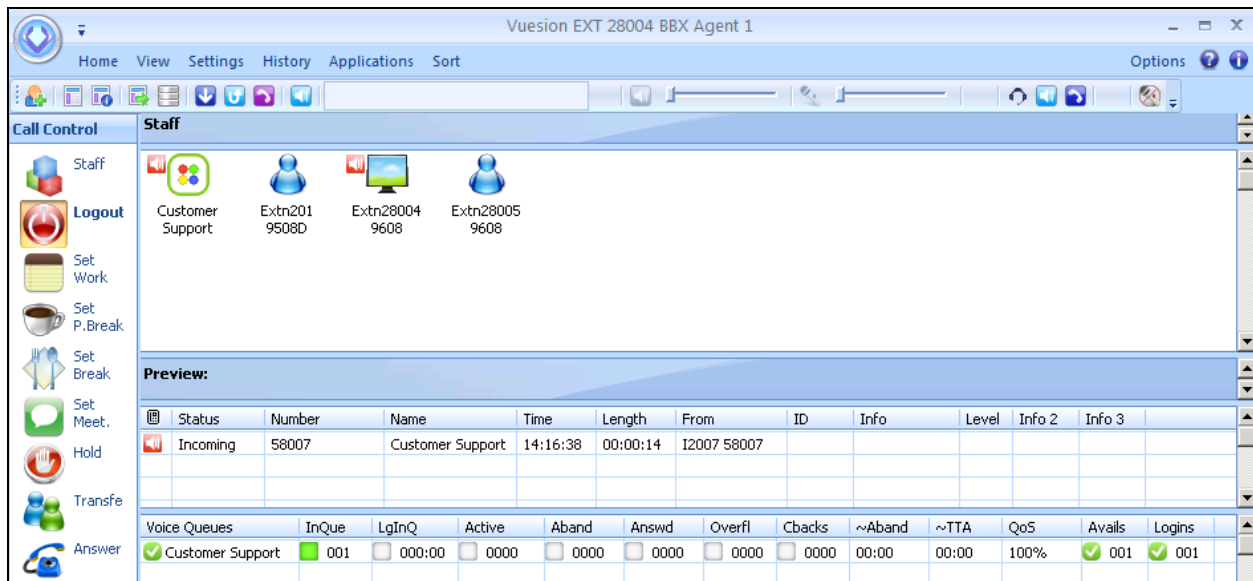


The screen is updated in the right pane, as shown below.

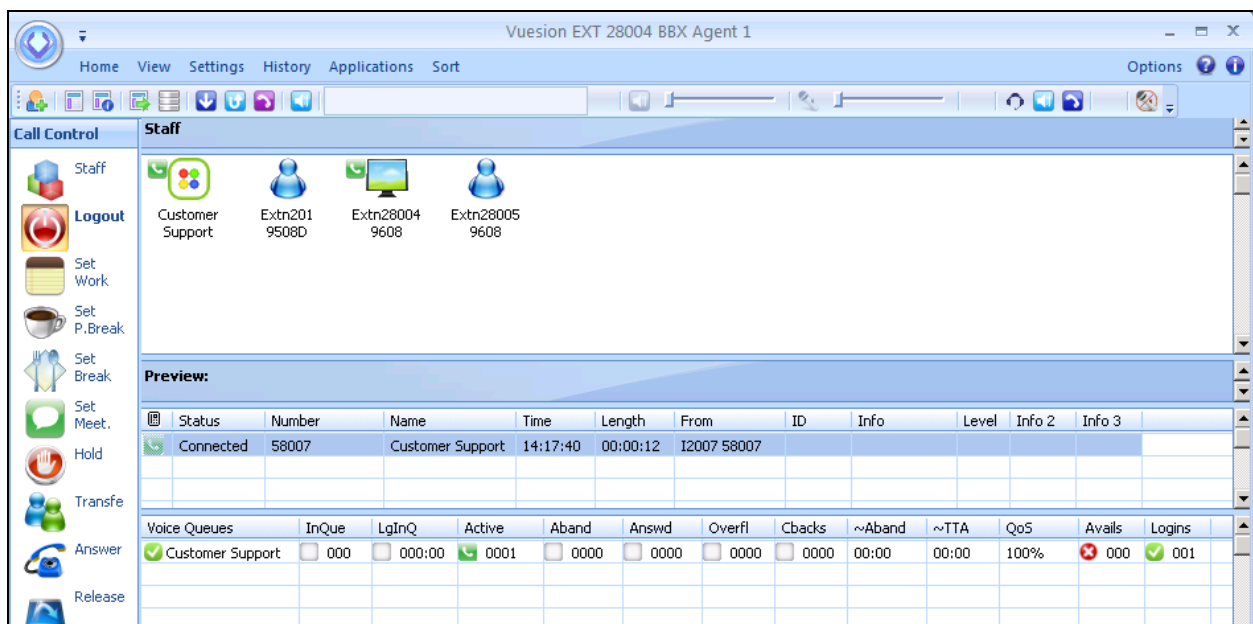


Make an incoming trunk call to the Main hunt group, and verify that the screen is updated to reflect a ringing call. Also verify that the entry shown in the **Preview** pane reflects the proper information for the call.

Click on the **Answer** icon in the left pane to answer the call.



Verify the agent's telephone is connected to the caller, and that the agent screen is updated to show the call being connected, as shown below. Click on the **Release** icon to complete the call.



From the PC running Vuesion Reports, double-click on the **VuesionReports** icon shown on the desktop, which was created as part of installation. In the compliance testing, Vuesion Reports was running on the Vuesion server.



The **Vuesion Reports Login** screen is displayed. For **Server IP/Name**, enter the IP address of the Ethernet interface on the Vuesion server used for connectivity with clients, in this case “110.10.10.104”. For **TCP/Port**, enter “60029”. For **Which Reports**, select “Current Reports” from the drop-down list.

For **Supervisor ID** and **Password**, enter the corresponding credentials for the supervisor from **Section 6.10**, as shown below.

The screenshot shows the 'Vuesion Reporting' application window. On the left is an 'Explorer' pane with a tree view. Under 'Queues', 'Performance' is selected and highlighted in orange. Other items include 'Service Level', 'Abandoned Activity', 'Activity', 'Resolutions Activity', 'Resolutions Summary', 'Email Activity', 'Email Summary', 'FAX Activity', 'FAX Summary', and 'Chart'. Under 'Agents', 'Performance' and 'Multimedia Performance' are listed. The main area is titled 'Initial Login' and contains several input fields: 'Server IP/Name' with the value '110.10.10.104', 'TCP/Port' with '60029', 'Which Reports' with a dropdown menu showing 'Current Reports', 'Supervisor ID' with '50003', and 'Password' with masked characters 'xxxxxx'. At the bottom are 'Login' and 'Cancel' buttons.

The **Supervisor Login** screen is displayed. Retain the default values, and click **View Reports**.

Tools Reporting

Explorer + -

Queues

Performance

- Service Level
- Abandoned Activity
- Activity
- Resolutions Activity
- Resolutions Summary
- Email Activity
- Email Summary
- FAX Activity
- FAX Summary
- Chart

Agents

- Performance
- Multimedia Performance
- States
- All Queues Calls
- Calls By Queue
- Activity
- Resolution Summary
- Chart

Campaign

- Summary
- Activity

Vuesion Reporting

Start Date Selection

November, 2011						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
44	30	31	1	2	3	4
45	6	7	8	9	10	11
46	13	14	15	16	17	18
47	20	21	22	23	24	25
48	27	28	29	30	1	2
49	4	5	6	7	8	9

End Date Selection

November, 2011						
Sun	Mon	Tue	Wed	Thu	Fri	Sat
44	30	31	1	2	3	4
45	6	7	8	9	10	11
46	13	14	15	16	17	18
47	20	21	22	23	24	25
48	27	28	29	30	1	2
49	4	5	6	7	8	9

TTA - Time Columns

10	30	60	120
----	----	----	-----

Talk - Time Columns

60	120	180	240
----	-----	-----	-----

Abandon - Time Columns

10	30	60	120
----	----	----	-----

☐ Sort By IDs ☒ Sort By Names

Long Calls greater 1800

Short Calls less than 10

☐ Enable

☐ Previous Day Report Week On:

☐ Previous Week

☐ Previous Month

File Format

Destination Email Address

Cancel

View Reports

Send Request

The **Vuesion CDR/ACD Reports** screen is displayed next. Select **Agents > Activity** from the left pane menu.

Tools

Reporting

About Help

Explorer

Queues

Performance

Service Level

Abandoned Activity

Activity

Resolutions Activity

Resolutions Summary

Email Activity

Email Summary

FAX Activity

FAX Summary

Chart

Agents

Performance

Multimedia

Performance States

All Queues Calls

Calls By Queue

Activity

Resolution Summary

Chart

Campaign

Summary

Activity

Agents Summary

Agents Activity

Resolutions Activity

Stations

Activity

Summary

Chart

Vuesion Reports


11/28/2011


Revision 13


Monday 11/28/2011 - Monday 11/28/2011

Vuesion®

Reporting







The **Vuesion CDR/ACD Reports** screen is updated with the **Agent Activity** report. Verify that there is an entry reflecting the last call with proper information, as shown below.

Vuesion Reports

Agent Activity

BBX Agent 1 11/28/2011 Monday 11/28/2011 - Monday 11/28/2011

Date / Time	Skillset Group Name	Call Type	Duration	Call TTA	Caller ID Name	ANI / Number Dialed	Hung up First	Xfered From	Reason Code
11/28/2011	BBX Agent 1	ID: 50001							
13:44:33	Customer Support	Login	00:00:00				Caller		
13:44:33	Customer Support	Ready	00:01:14				Caller		
13:45:47	Customer Support	Logout	00:01:14				Caller		
13:46:48	Customer Support	Login	00:00:00				Caller		
14:17:38	Customer Support	CC Inbound	00:00:26	00:00:03	12007 58007	58007	Caller		
14:18:06	Customer Support	Ready	00:02:17				Caller		
14:20:23	Customer Support	Logout	00:33:35				Caller		

CAP | NUM | SCRL

8. Conclusion

These Application Notes describe the configuration steps required for BBX Technologies Vuesion Multimedia Contact Center to successfully interoperate with Avaya IP Office. All feature and serviceability test cases were completed with observations noted in **Section 2.2**.

9. Additional References

This section references the product documentation relevant to these Application Notes.

1. *IP Office 8.0 Documentation CD*, December 2011, available at <http://support.avaya.com>.
2. *Vuesion Application Server Contact Center Configuration Guide*, available upon request to BBX Technologies Support.

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